BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads Drains and Footpath from Sanjeevininagar Ashwath Katte to Kodigehalli Main Road at Ravishankar Residency Layout in ward No 07 - Byatarayanapura, Kodigehalli Sub Division.

Est Cost: =25.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Sanjeevini Nagar								
	Ashwath Katte Main Road		2	375.00	0.70	0.55	288.75		
	Theertha Bakery road		2	40.00	0.70	0.55	30.80		
			2	65.00	0.70	0.55	50.05		
	Over Burden Earth								
			2	80.00	1.00	0.50	80.00		
							449.60	186.92	**84039.23**
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	BS Slab Drain	Sqm							
	Damaged Drain		2	200.00	1.80	--	720.00		
	Consider 15% for missing and Damaged Slabs						-108.00		
	BS Slab Cover		2	150.00	1.20	--	360.00		
	Consider 15% for missing and Damaged Slabs						-54.00		
							918.00	80.56	**73954.08**
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 10cms thick (P.No.25, I.No.5.31.2 of PW, P&IWTD SR 2016-17)								
	For BS Slab Cover / Missing	Sqm					54.00		
							54.00	825.74	**44589.96**
4	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain / Missing	Sqm					108.00		
							108.00	665.68	**71893.44**
5	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	For Flagging/Raising of BS Slab Drain	Cum							
			4	120.00	0.35	0.10	16.80		
							16.80	5348.76	**89859.17**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
6	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	For Flagging/Raising of BS Slab Drain	Cum							
			2.00	120.00	0.45	0.45	48.60		
							48.60	4438.22	**215697.49**
7	KSRB 5-14: providing and constructing load bearing wall with solid concrete blocks having block density not less than 1800 kg/m3 of size solid block 400x150x200mm having a minimum average compressive strength of 4.00 N/mm2 confirming to IS 2185(Part 1):2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials labour charges, scaffolding, curing, hire charges of machineries etc., complete as per specifications. KBS No. 5.4 (P.No.24, I.No.5.26.2 of PW, P&IWTD SR 2016-17)								
	For Flagging/Raising of BS Slab Drain	Cum							
			2.00	120.00		0.40	96.00		
							96.00	961.42	**92296.32**
8	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	For Flagging/Raising of BS Slab Drain	Sqm	2.00	120.00		0.45	108.00		
							108.00	102.82	**11104.56**
9	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
			4.00	120.00	0.35	0.075	12.60		
							12.60	5767.46	**72670.00**
10	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Theertha Bakery road		1	40.00	5.50	0.25	55.00		
			1	65.00	5.50	0.25	89.38		
	Bad Reaches		1	160.00	1.50	0.30	72.00		
			5	2.00	2.50	0.30	7.50		
			6	1.50	1.80	0.30	4.86		
			8	1.00	1.20	0.30	2.88		
			10	0.50	6.00	0.30	9.00		
							240.62	148.76	**35793.89**
11	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Theertha Bakery road		1	40.00	5.50	0.25	55.00		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
			1	65.00	5.50	0.25	89.38		
	Bad Reaches		1	160.00	1.50	0.25	60.00		
			5	2.00	2.50	0.25	6.25		
			6	1.50	1.80	0.25	4.05		
			8	1.00	1.20	0.25	2.40		
			10	0.50	6.00	0.25	7.50		
							224.58	1768.08	**397066.57**
12	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Theertha Bakery road		1	40.00	5.50	--	220.00		
			1	65.00	5.50	--	357.50		
	Bad Reaches		1	160.00	1.50	--	240.00		
			5	2.00	2.50	--	25.00		
			6	1.50	1.80	--	16.20		
			8	1.00	1.20	--	9.60		
			10	0.50	6.00	--	30.00		
							898.30	29.68	**26661.54**
13	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Ashwath Katte Main Road		1	375.00	6.70	--	2512.50		
	Theertha Bakery road		1	40.00	5.50	--	220.00		
			1	65.00	5.50	--	357.50		
							3090.00		
	Deduct prime coat						-898.30		
							2191.70	3.18	**6969.61**
14	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM/Profile correction	Sqm							
	Sanjeevini Nagar		1	100.00	2.52	--	252.00		
	Bad Reaches		1	160.00	1.50	--	240.00		
			5	2.00	2.50	--	25.00		
			6	1.50	1.80	--	16.20		
			8	1.00	1.20	--	9.60		
			10	0.50	6.00	--	30.00		
	For Laying BC								
	Ashwath Katte Main Road		1	375.00	6.70	--	2512.50		
	Theertha Bakery road		1	40.00	5.50	--	220.00		
			1	65.00	5.50	--	357.50		
							3662.80	12.72	**46590.82**
15	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	For Laying DBM/Profile correction	Cum							
	Sanjeevini Nagar		1	100.00	2.52	0.05	12.60		
							12.60	7036.28	**88657.13**
16	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Ashwath Katte Main Road		1	375.00	6.70	0.04	100.50		
	Theertha Bakery road		1	40.00	5.50	0.04	8.80		
			1	65.00	5.50	0.04	14.30		
							123.60	8013.60	**990480.96**
17	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	480.00	0.10	--	96.00		
	Centre line		0.5	480.00	0.10	--	24.00		
							120.00	542.72	**65126.40**
							Total Construction Cost		**2413451.170**
18	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**1394.21**	27.00	**37644.00**
	Waste = 123.6 X 141 X 8 / 100 = 1394.21								
19							**Cost towards Preparation of DPR LS**		**24135.00**
20							**Cost towards PMC / Third Party inspection LS**		**24135.00**
								Sub Total	**2499365.17**
21							**Miscellaneous and rounding off**		**634.83**
								Total	**2500000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

KEY MAP: 8. SANJEEVINI NAGAR